

**REMARKS**

Claims 1-3, 5, 7-12, 18-22, 26-36 are pending in the application. Claims 28-33 were withdrawn from consideration, as drawn to a non-elected invention. Claims 1, 5, 8, 18-22, 26, 27 and 34-36 were rejected. Claims 2, 3, 7 and 9-12 were objected to.

The disclosure at pages 11 and 12 has been amended to correspond with the formulas on page 12 and Figure 1 that show that the SOG is produced from an alkyl substituted trialkoxysilane, or an alkyl or dialkyl substituted dialkoxysilane. The description on page 12 now does not conflict with the description of the R groups on page 11.

Applicant agrees with the examiner that claims 8, 18 and 35 claims that the phosphor dopant can be an organic dye or a metal complex. Line 21 on page 12 teaches that the dopant can be organic or inorganic, but **"preferably comprises a phosphor dopant."** Claims 8, 18 and 35 have been amended to conform to the disclosure and to make the claim language consistent with the language in the disclosure. There is no conflict between the amended claims and the description of the dopant on page 12 or at other portions of the disclosure.

Claims 1 and 5 have been amended to clarify the definition of the trialkoxysilane and the dialkoxysilane. These amendments should overcome the rejection of claims 1 and 5 under 35 U.S.C. 112, second paragraph.

The Examiner stated that U.S. 6,984,483 discloses that silicic acid condensates can be produced by reacting diphenylsilane diol with a silane that can have the formula  $R_2(SiOR')_2$  where  $R'$  is alkyl and R can be an  $C_{1-18}$  alkyl. There is no suggestion that this process will provide a sol-gel spin-on-glass material that is useful in the production of devices such as waveguides. In addition, there is no suggestion or disclosure in the prior art to add phosphor dopant to provide applicants' claimed sol-gel spin-on-glass material. The cited prior art does not support the assumption that a product produced by a similar

process, without the suggestion or disclosure to add a phosphor dopant, would provide applicants' claimed product and the claimed process for producing that product.

It is well known to those skilled in the art that not all organic dyes or metal complexes are phosphor dopants. In fact, one skilled in the art would know that the overwhelming majority of organic dyes and metal complexes are not phosphor dopants. In the absence of a specific disclosure that either an organic dye or a metal complex is a phosphor dopant, one skilled in the art would assume that the disclosure of the addition of such a dye or metal complex is not a disclosure or suggestion of the addition of a phosphor dopant. Therefore, the prior art materials disclosed in U.S. 6,984,483 are not capable of performing the intended use and, therefore, do not meet the claims. In addition, a manipulative difference between the claims and the cited prior art is the addition of a phosphor dopant, in contrast to any dye or filler. In view of the foregoing, applicants' submit that the amended claims are both novel and unobvious over U.S. 6,984,483.

The Examiner stated that U.S. 6,818,721 discloses producing a silicic acid polycondensate by reacting diphenylsilanediol with a silane having the formula  $\text{RSi}(\text{OR}')_3$ , where  $\text{R}'$  is alkyl and  $\text{R}$  can be alkyl, Methacryloxyalkyl or Glycidylloxyalkyl. As pointed out above, applicants have amended these claims, including independent claim 18, to require that a phosphor dopant, as defined in the claims, be added. Claim 34 specifies the most preferred phosphor dopants, which are a YAG base phosphor or moisture sensitive phosphor nano-particles. Claim 35 specifies a process for producing the material of claim 18 by reacting an alkyl substituted trialkoxysilane, or alkyl or dialkyl substituted dialkoxysilane with a silane diol, wherein the alkyl group has from 1 to 8 carbon atoms, wherein the reaction of the alkyl substituted trialkoxysilane, or alkyl or dialkyl substituted dialkoxysilane silane with the silane diol is carried out in the presence of a catalyst, and further comprises adding to the sol-gel spin-on glass material a phosphor dopant. The phosphor dopant consists essentially of a YAG base phosphor, moisture sensitive phosphor nano-particles, or an organic material selected from organic dyes or metal complexes.

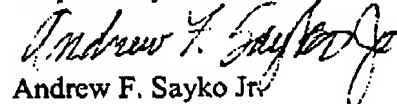
Again, there is no suggestion that the prior art process will provide a sol-gel spin-on-glass material that is useful in the production of devices such as waveguides. There is no suggestion or disclosure in the prior art to add a phosphor dopant to provide applicants' claimed sol-gel spin-on-glass material. This cited prior art does not support the assumption that a product produced by a similar process, without the suggestion or disclosure to add a phosphor dopant, would provide applicants' claimed product and the claimed process for producing that product. Therefore, applicants submit that the amended claims are both novel and unobvious over U.S. 6,818,721.

### CONCLUSIONS

Claims 1, 5 and 8 have been amended to overcome the rejections under 35 U.S.C. 112 set forth in the Office Action. Claims 2, 3, 7 and 9-12 should, therefore, no longer depend upon rejected base claims. Therefore, claims 1, 2, 3, 5, 7, 8 and 9-12 should be allowable.

In view of the foregoing amendments and remarks, it is submitted that all the claims should now be in condition for allowance. Therefore, the amendments to the claims should be entered. An indication of the allowability of the claims, by the issuance of as Notice of Allowance, is respectfully requested.

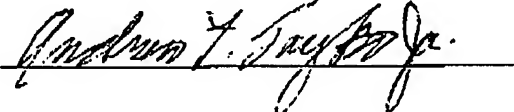
Respectfully submitted,

  
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